

CLAIMS

1. A method for improving the quality of data transmission in cellular radio systems utilizing time division multiple access, in which the strength of a signal received at a base station is measured and a decoder for soft decision-making is employed, comprising:

measuring the strength of the signal the base station receives in at least two consecutive time slots,

determining a first weighting coefficient by comparing the strength of the signal the base station receives in a time slot with the strength of the signal the base station receives in a previous time slot,

determining a second weighting coefficient by comparing the strength of the signal the base station receives in a time slot with the strength of the signal the base station receives in a following time slot,

reducing by means of the first determined weighting coefficient in soft bit decision-making the significance of at least one symbol at the beginning of the burst the base station receives in a time slot if the difference between the measured signal strengths is considerable,

reducing by means of the second determined weighting coefficient in soft bit decision-making the significance of at least one symbol at the end of the burst the base station receives in a time slot if the difference between the measured signal strengths is considerable.

2. A method for improving the quality of data transmission in cellular radio systems utilizing time division multiple access, in which the strength of a signal received at a base station is measured and a decoder for soft decision-making is employed, comprising:

measuring the strength of the signal the base station receives in at least two consecutive time slots,

determining a first weighting coefficient by comparing the strength of the signal the base station receives in a time slot with the strength of the signal the base station receives in a previous time slot,

reducing by means of the first determined weighting coefficient in soft bit decision-making the significance of at least one symbol at the beginning of the burst the base station receives in a time slot if the difference between the measured signal strengths is considerable.

3. A method for improving the quality of data transmission in cellular radio systems utilizing time division multiple access, in which the strength of a signal received at a base station is measured and a decoder for soft decision-making is employed, comprising:

measuring the strength of the signal the base station receives in at least two consecutive time slots,

determining a second weighting coefficient by comparing the strength of the signal the base station receives in a time slot with the strength of the signal the base station receives in a following time slot,

reducing by means of the second determined weighting coefficient in soft bit decision-making the significance of at least one symbol at the end of the burst the base station receives in a time slot if the difference between the measured signal strengths is considerable.

4. A method as claimed in claim 1, 2 or 3, wherein the difference in signal strengths is considerable if it exceeds a determined threshold value.

5. A method as claimed in claim 1, 2 or 3, wherein the weighting coefficients are higher than 0 but lower than 1.

6. A method as claimed in claim 1, 2 or 3, wherein the strength of the signal received at the base station is determined using RSSI (Received Signal Strength Indicator) measurement.

7. A method as claimed in claim 1, 2 or 3, wherein the weighting coefficients have the same values for all symbols to be weighted in each time slot.

8. A method as claimed in claim 1, 2 or 3, wherein the weighting coefficients have different values for different symbols to be weighted in each time slot.

9. A base station receiver improving the quality of data transmission in cellular radio systems utilizing time division multiple access, which receiver measures the strength of a received signal and employs a decoder for soft decision-making; the base station comprises:

means for measuring the strength of the signal the base station receives in at least two consecutive time slots,

means for determining a first weighting coefficient by comparing the strength of the signal the base station receives in a time slot with the strength of the signal the base station receives in a previous time slot,

means for determining a second weighting coefficient by comparing the strength of the signal the base station receives in a time slot with the strength of the signal the base station receives in a following time slot,

means for reducing by means of the first determined weighting coefficient in soft bit decision-making the significance of at least one symbol at the beginning of the burst the base station receives in a time slot if the difference between the measured signal strengths is considerable,

means for reducing by means of the second determined weighting coefficient in soft bit decision-making the significance of at least one symbol at the end of the burst the base station receives in a time slot if the difference between the measured signal strengths is considerable.

10. A base station receiver improving the quality of data transmission in cellular radio systems utilizing time division multiple access, which receiver measures the strength of a received signal and employs a decoder for soft decision-making; the base station comprises:

means for measuring the strength of the signal the base station receives in at least two consecutive time slots,

means for determining a first weighting coefficient by comparing the strength of the signal the base station receives in a time slot with the strength of the signal the base station receives in a previous time slot,

means for reducing by means of the first determined weighting coefficient in soft bit decision-making the significance of at least one symbol at the beginning of the burst the base station receives in a time slot if the difference between the measured signal strengths is considerable.

11. A base station receiver improving the quality of data transmission in cellular radio systems utilizing time division multiple access, which receiver measures the strength of a signal received at a base station and employs a decoder for soft decision-making; the base station comprises:

means for measuring the strength of the signal the base station re-

ceives in at least two consecutive time slots,

means for determining a second weighting coefficient by comparing the strength of the signal the base station receives in a time slot with the strength of the signal the base station receives in a following time slot,

means for reducing by means of the second determined weighting coefficient in soft bit decision-making the significance of at least one symbol at the end of a burst the base station receives in a time slot if the difference between the measured signal strengths is considerable.

12. A system as claimed in claim 9, 10 or 11, wherein the difference in signal strengths is considerable if it exceeds a determined threshold value.

13. A method as claimed in claim 9, 10 or 11, wherein the weighting coefficients are higher than 0 but lower than 1.

14. A method as claimed in claim 9, 10 or 11, wherein the strength of the signal received at the base station is determined using RSSI (Received Signal Strength Indicator) measurement.

15. A method as claimed in claim 9, 10 or 11, wherein the weighting coefficients have the same values for all symbols to be weighted in each time slot.

16. A method as claimed in claim 9, 10 or 11, wherein the weighting coefficients have different values for different symbols to be weighted in each time slot.